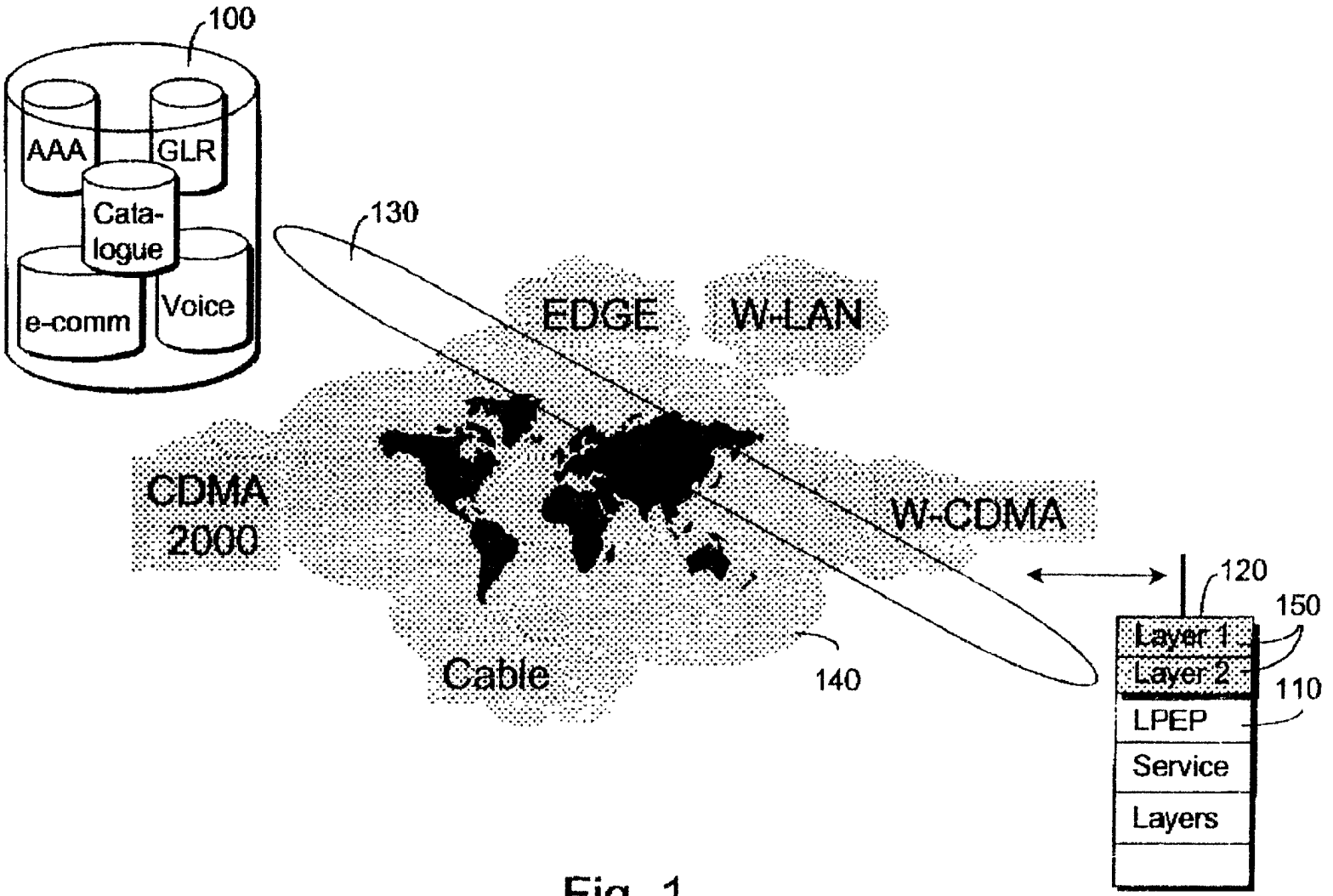
100
AAA
GLR
Cata-
logue
e-comm
Voice
130
EDGE
W-LAN
CDMA
2000
W-CDMA
Cable
140
120
150
Layer 1
Layer 2
110
LPEP
Service
Layers

Fig. 1

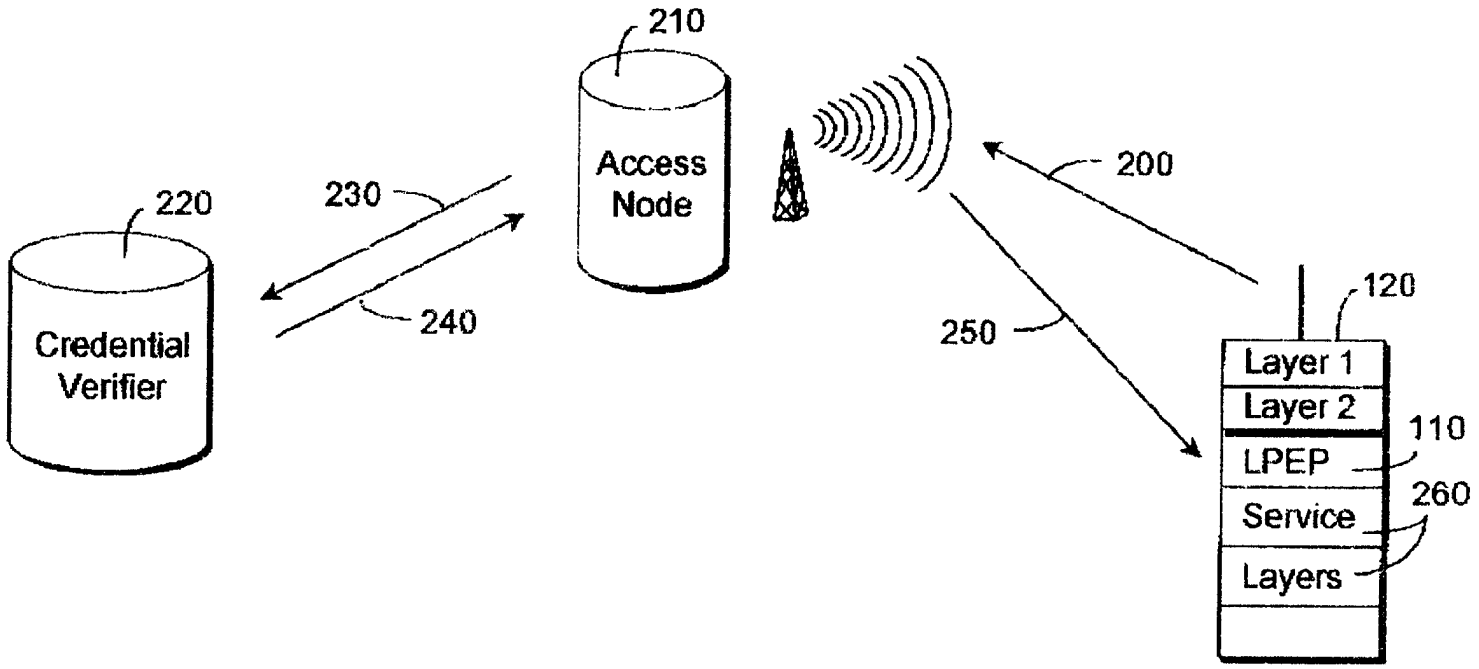
210
Access Node
200
220
230
240
Credential Verifier
250
120
Layer 1
Layer 2
LPEP
110
Service
260
Layers

Fig. 2

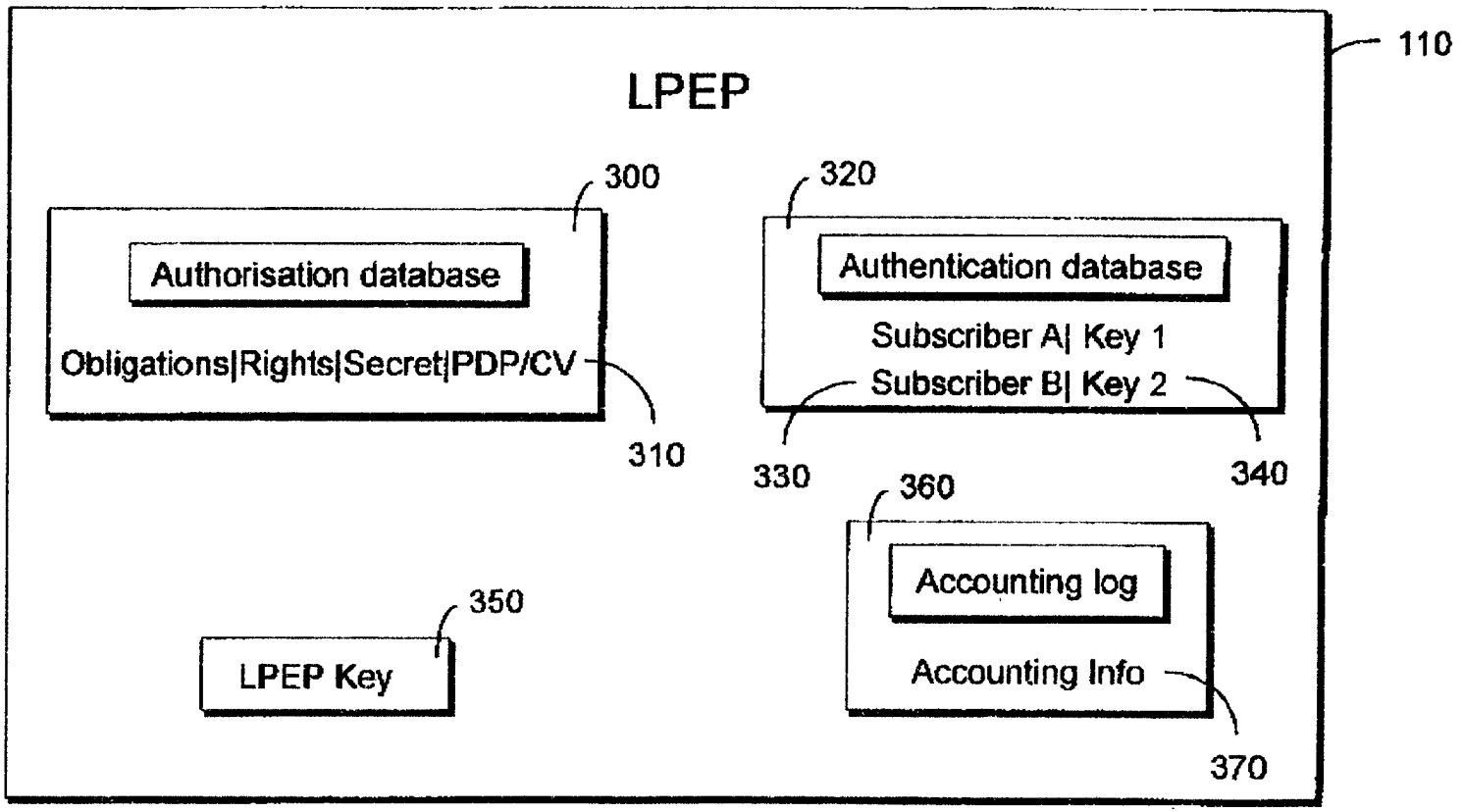
LPEP
110
300
Authorisation database
Obligations|Rights|Secret|PDP/CV
310
320
Authentication database
Subscriber A| Key 1
Subscriber B| Key 2
330
340
360
Accounting log
Accounting Info
370
350
LPEP Key

Fig. 3

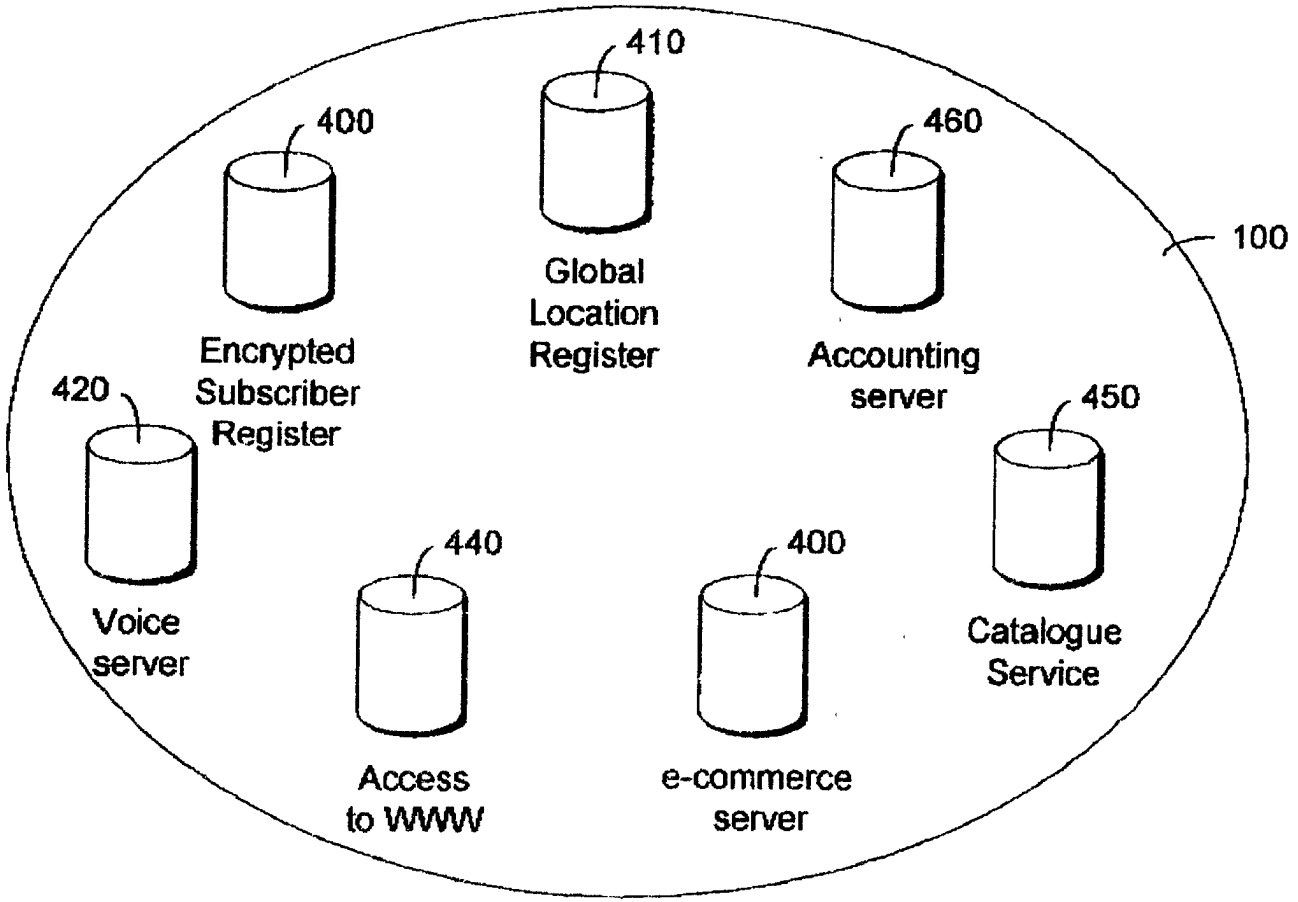
410
400
460
100
Global
Location
Register
Encrypted
Subscriber
Register
Accounting
server
420
450
Voice
server
440
400
Catalogue
Service
Access
to WWW
e-commerce
server

Fig. 4

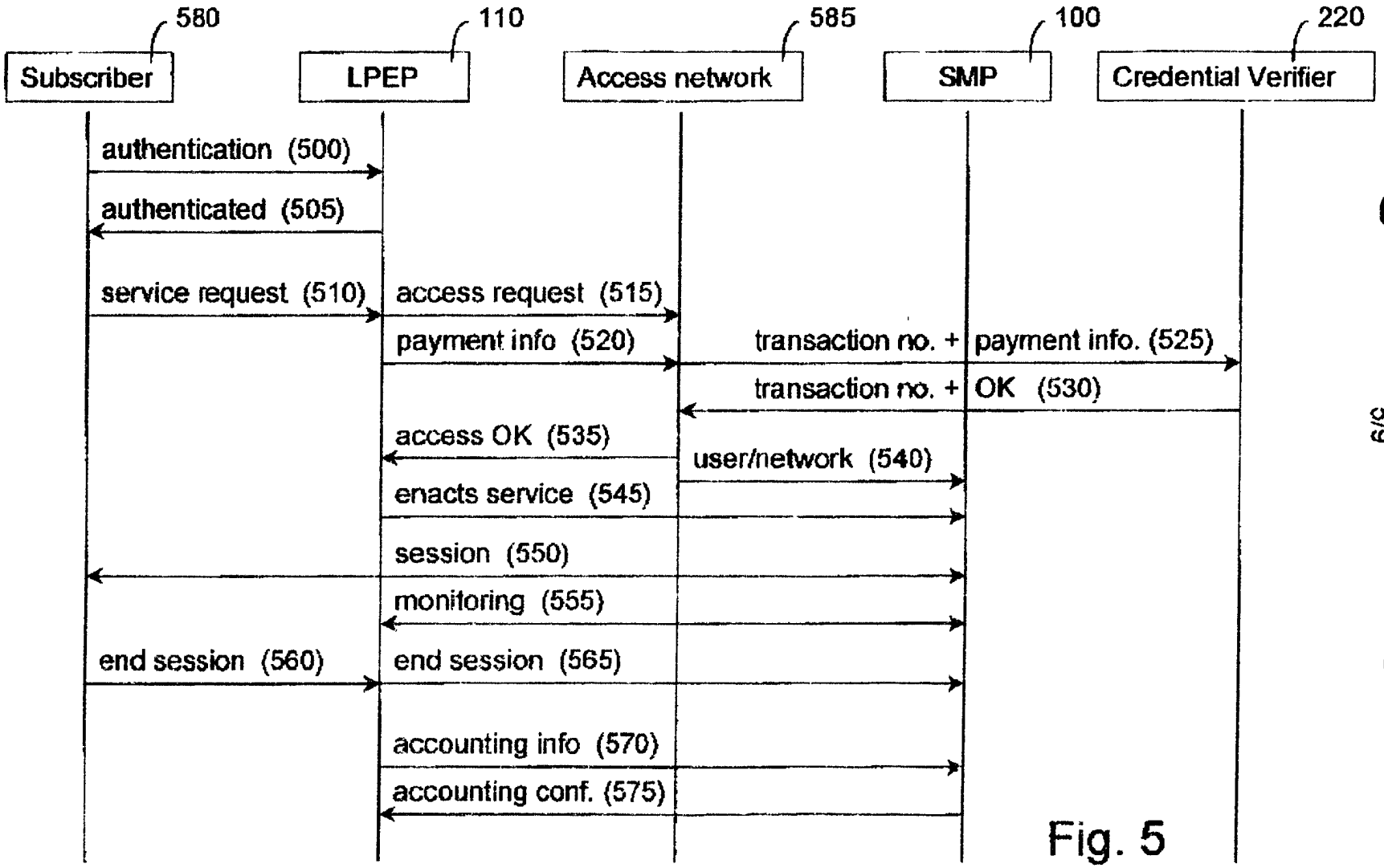
580
110
585
100
220
Subscriber
LPEP
Access network
SMP
Credential Verifier
authentication (500)
authenticated (505)
service request (510)
access request (515)
payment info (520)
transaction no. +
payment info. (525)
transaction no. +
OK (530)
access OK (535)
user/network (540)
enacts service (545)
session (550)
monitoring (555)
end session (560)
end session (565)
accounting info (570)
accounting conf. (575)

Fig. 5

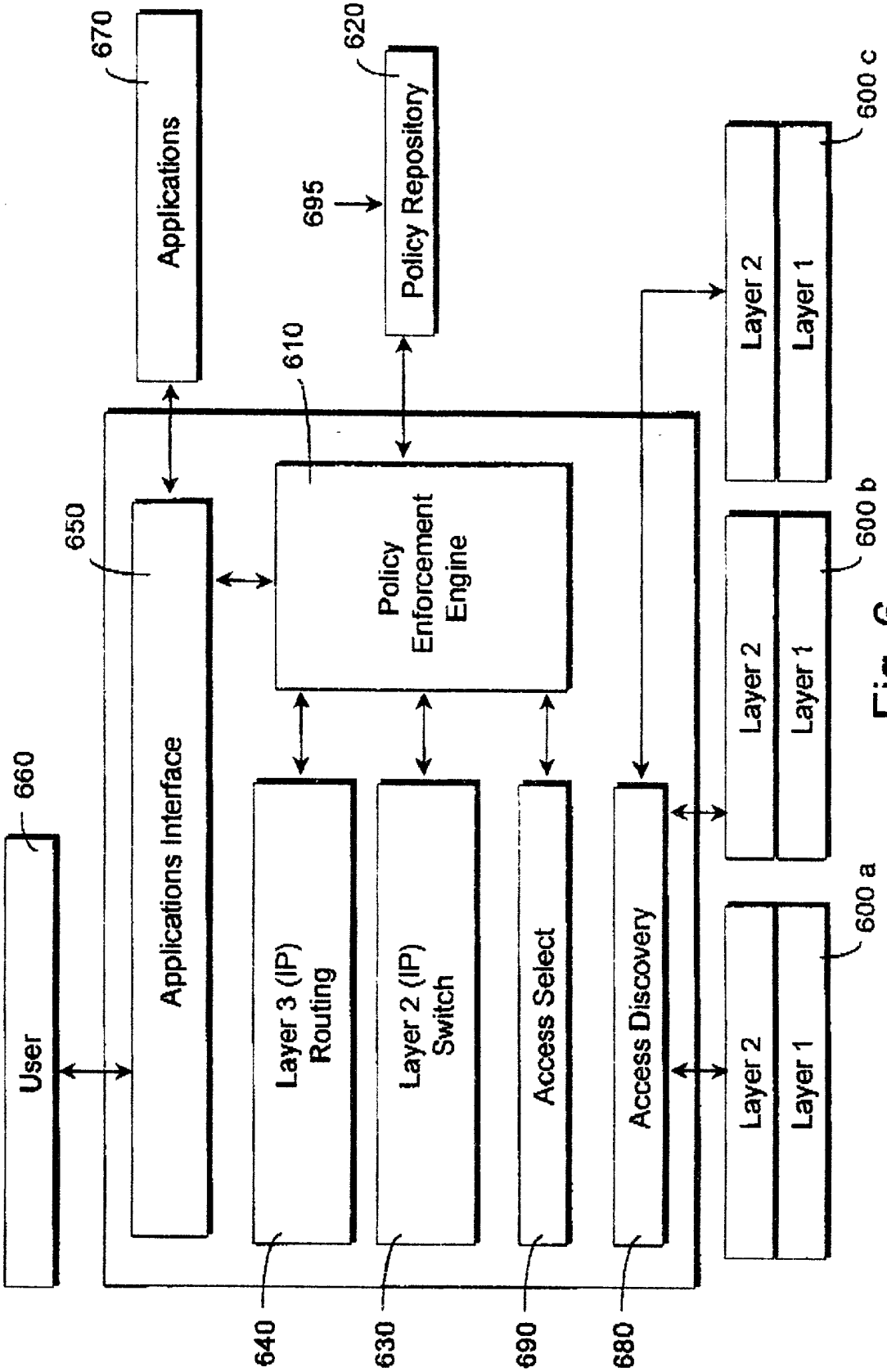
670
Applications
620
Policy Repository
695
610
650
Policy Enforcement Engine
Applications Interface
660
User
Layer 3 (IP) Routing
Layer 2 (IP) Switch
Access Select
Access Discovery
640
630
690
680
Layer 2
Layer 1
600 c
600 b
600 a

Fig. 6

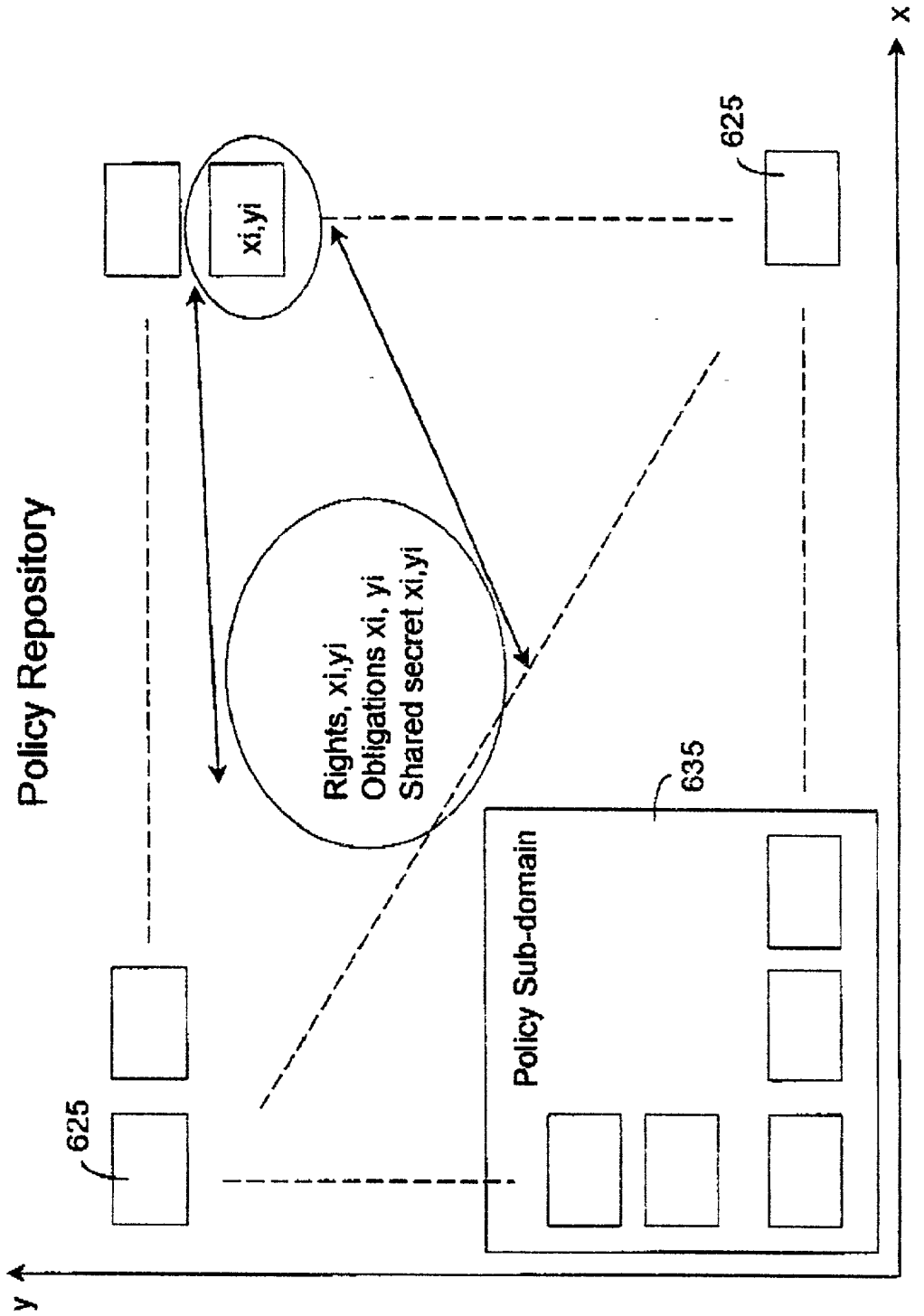
Policy Repository
xi,yi
625
625
Rights, xi,yi
Obligations xi, yi
Shared secret xi,yi
635
Policy Sub-domain
x
y

Fig. 7

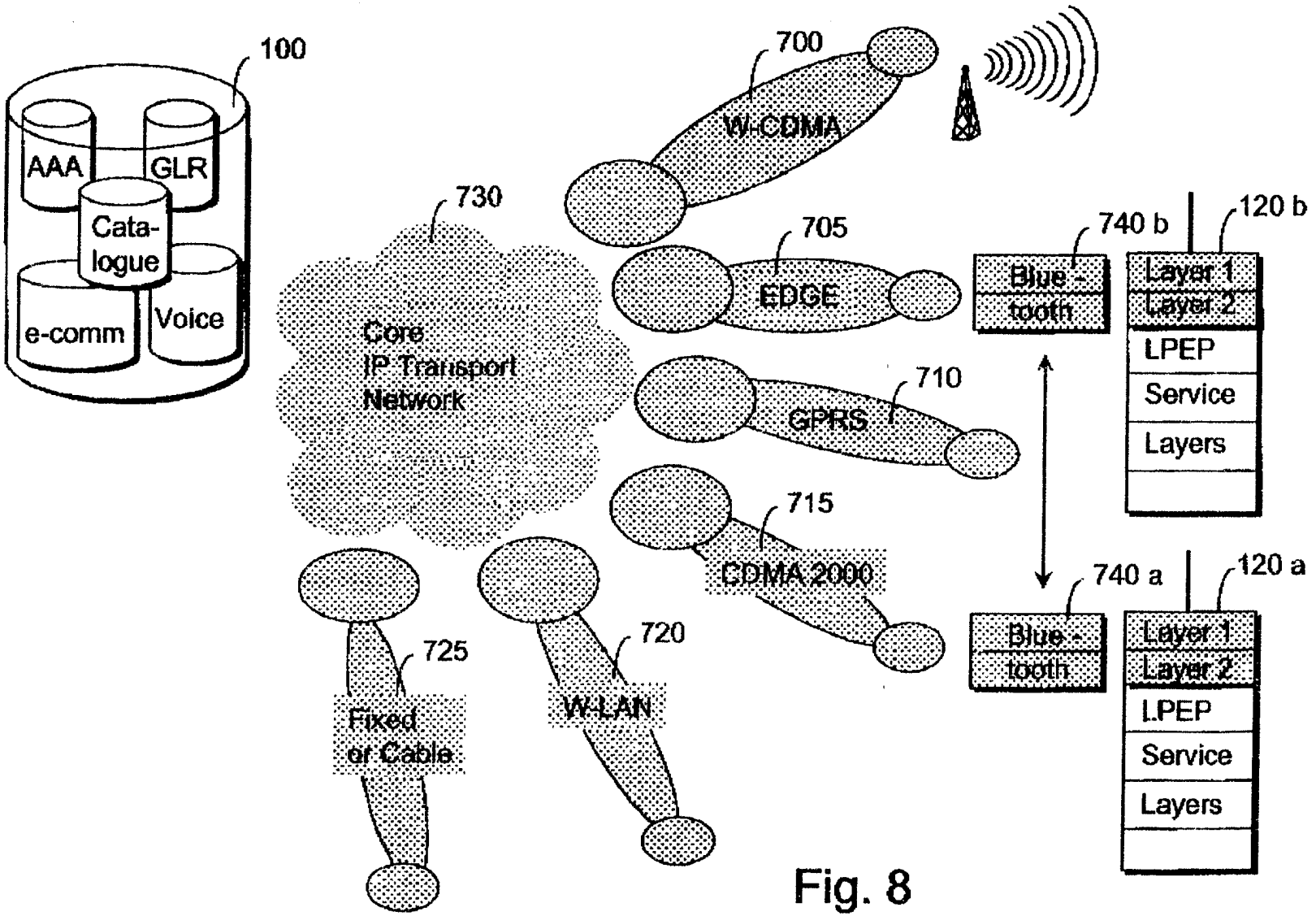
100
AAA
GLR
Cata-
logue
e-comm
Voice
700
W-CDMA
730
Core
IP Transport
Network
705
EDGE
710
GPRS
715
CDMA 2000
720
W-LAN
725
Fixed
or Cable
740 b
Blue -
tooth
120 b
Layer 1
Layer 2
LPEP
Service
Layers
740 a
Blue -
tooth
120 a
Layer 1
Layer 2
LPEP
Service
Layers

Fig. 8

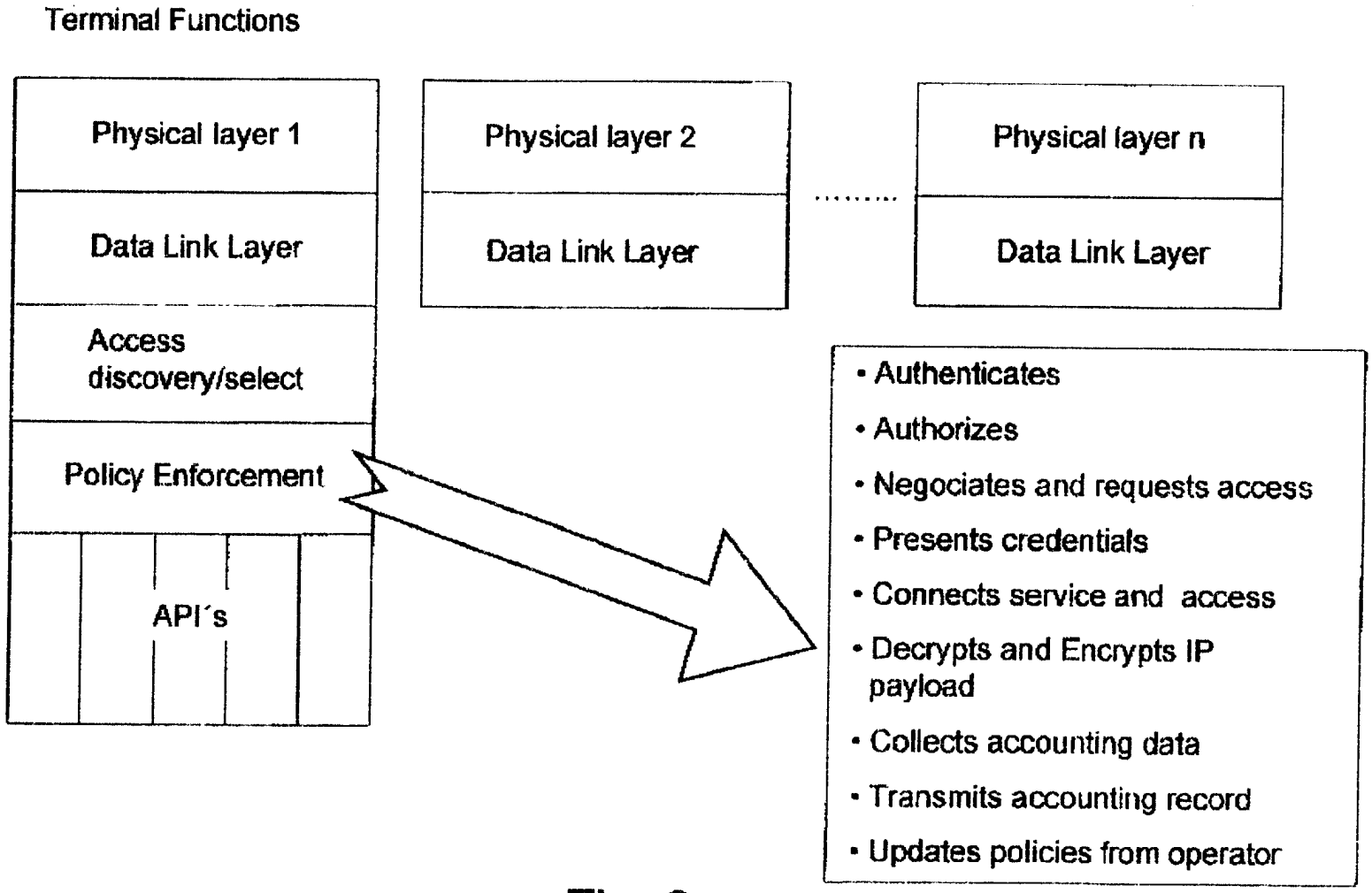
Terminal Functions
Physical layer 1
Data Link Layer
Access discovery/select
Policy Enforcement
API´s
Physical layer 2
Data Link Layer
Physical layer n
Data Link Layer
• Authenticates
• Authorizes
• Negociates and requests access
• Presents credentials
• Connects service and access
• Decrypts and Encrypts IP payload
• Collects accounting data
• Transmits accounting record
• Updates policies from operator

Fig. 9